

This listing of claims will replace all prior versions, and listings, of claims in the application:

Amendments to the Claims:

1. (currently amended) A speed change ratio control unit for a continuously variable transmission which converts input rotation into output rotation in continuously changing speed manner through controlling a step motor as that is a driving actuator for a speed change control valve, said speed change ratio control unit comprising:

a computing device for generating a command signal to control said step motor;

storage for storing a step position ASTP of said step motor corresponding to said command signal;

an input rotation detection means for detecting said input rotation;

an output rotation detection means for detecting said output rotation;

an actual speed change ratio calculation means that calculates actual speed change ratio from said input rotation detected and said output rotation detected;

a step-out determination means which compares ~~[[a]]~~ said step position ASTP of said step motor stored by said ~~speed change ratio control unit~~ storage and a step position BSTP of said step motor corresponding to said calculated actual speed change ratio at every predetermined operation cycle, and if $ASTP \neq BSTP$ is satisfied determines that a step-out has occurred on said step motor in which a synchronization between said command signal and said calculated actual speed change ratio is lost;

a step-out correction means that when a the step-out is determined by said step-out determination means corrects said ASTP so as to reduce a difference between said ASTP and BSTP; and

a drive means for said driving step motor using said corrected ASTP.

2. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 1, wherein said step-out determination means determines a the step-out of said step motor when a step-out determination condition that hydraulic pressure is in a state capable of realizing a speed change ratio corresponding to said step position **ASTP** of said step motor stored in said speed change ratio control unit which satisfies a step-out determination criterion.

3. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 1, wherein said step-out determination means determines a the step-out of said step motor when a step-out determination condition that an alteration of the speed change ratio is a predetermined value or less which satisfies a step-out determination criterion.

4. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 1, wherein said step-out determination means determines a the step-out of said step motor when a step-out determination condition that the acceleration or deceleration of said step motor is a predetermined value or less which satisfies a step-out determination criterion.

5. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 1, wherein said step-out determination means

determines a the step-out of said step motor when a step-out determination condition that braking is not being operated which satisfies a step-out determination criterion.

6. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 1, wherein said step-out determination means determines a the step-out of said step motor when a step-out determination condition that a lever is not being operated by a driver which satisfies a step-out determination criterion.

7. (previously presented) The speed change ratio control unit for a continuously variable transmission according to claim 1, wherein said determination means makes said determination when the conditions set forth below are satisfied:

hydraulic pressure is in a state capable of realizing a speed change ratio corresponding to a step position **ASTP** of said step motor stored in said speed change ratio control unit is satisfied, on an occasion of step-out determination,

an alteration of the speed change ratio is a predetermined value or less which satisfies a step-out criterion,

acceleration or deceleration is a predetermined value or less which satisfies a step-out criterion,

braking is not being operated which satisfies a step-out criterion, and

that a lever is not being operated by a driver which satisfies a step-out criterion.

8. (currently amended) A speed change ratio control unit for a continuously variable transmission for controlling a step motor for a drive actuator of a speed change control valve in said speed change ratio control unit of said continuously variable

transmission which changes gears without going through stages and makes input rotation into output rotation, comprising:

a computing device for generating a command signal to control said step motor;

storage for storing a step position ASTP of said step motor corresponding to said

command signal;

an input rotation detection means for detecting said input rotation;

an output rotation detection means for detecting said output rotation;

an actual speed change ratio from said detected input rotation and output rotation;

a step-out determination means for determining at every predetermined operation cycle said speed change ratio control unit which compares ~~a memorized~~ said step position ASTP of said step motor stored in said storage with said computed actual speed change ratio which corresponds to a step position BSTP of said step motor when $ASTP \neq BSTP$ and a step-out arises in said step motor in which a synchronization between said command signal and said calculated actual speed change ratio is lost;

a step-out correction means for correcting said ASTP in the direction which lessens the difference of said ASTP and BSTP when said step-out is determined by said step-out determination means; and

a drive means for driving said step motor using ASTP after said step-out correction.

9. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 8, wherein said step-out determining means determines ~~a~~ the step-out of said step motor when said speed change ratio control unit is in said memorized step position ASTP of said step motor which corresponds to a speed change

ratio which is in a state of realizable hydraulic pressure which satisfies a step-out criterion of said step-out.

10. (currently amended) ~~The speed change ratio control unit for a continuously variable transmission according to claim 8;~~ A speed change ratio control unit for a continuously variable transmission for controlling a step motor for a drive actuator of a speed change control valve in said speed change ratio control unit of said continuously variable transmission which changes gears without going through stages and makes input rotation into output rotation, comprising:

a computing device for generating a command signal to control said step motor;

storage for storing a step position ASTP of said step motor corresponding to said command signal;

an input rotation detection means for detecting said input rotation;

an output rotation detection means for detecting said output rotation;

an actual speed change ratio from said detected input rotation and output rotation;

a step-out determination means for determining at every predetermined operation cycle said speed change ratio control unit which compares said step position ASTP of said step motor stored in said storage with said computed actual speed change ratio which corresponds to a step position BSTP of said step motor when $ASTP \neq BSTP$ and a step-out arises in said step motor in which a synchronization between said command signal and said calculated actual speed change ratio is lost, wherein said step-out determining means determines a the step-out of said step motor when a change of a speed change ratio results in a state below a predetermined value which satisfies a step-out criterion of said step-out;

a step-out correction means for correcting said ASTP in the direction which lessens the difference of said ASTP and BSTP when said step-out is determined by said step-out determination means; and

a drive means for driving said step motor using ASTP after said correction.

11. (currently amended) ~~The speed change ratio control unit for a continuously variable transmission according to claim 8,~~ A speed change ratio control unit for a continuously variable transmission for controlling a step motor for a drive actuator of a speed change control valve in said speed change ratio control unit of said continuously variable transmission which changes gears without going through stages and makes input rotation into output rotation, comprising:

a computing device for generating a command signal to control said step motor;

storage for storing a step position ASTP of said step motor corresponding to said command signal;

an input rotation detection means for detecting said input rotation;

an output rotation detection means for detecting said output rotation;

an actual speed change ratio from said detected input rotation and output rotation;

a step-out determination means for determining at every predetermined operation cycle said speed change ratio control unit which compares said step position ASTP of said step motor stored in said storage with said computed actual speed change ratio which corresponds to a step position BSTP of said step motor when $ASTP \neq BSTP$ and a step-out arises in said step motor in which a synchronization between said command signal and said calculated actual speed change ratio is lost, wherein said step-out determining means determines a the step-out of said step motor when the acceleration or deceleration of said step motor is below a predetermined value which satisfies a step-out criterion of said step-out;

a step-out correction means for correcting said ASTP in the direction which lessens the difference of said ASTP and BSTP when said step-out is determined by said step-out determination means; and

a drive means for driving said step motor using ASTP after said correction.

12. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 8, wherein said step-out determining means determines a the step-out of said step motor when a brake operation is not being performed which satisfies a step-out criterion of said step-out.

13. (currently amended) The speed change ratio control unit for a continuously variable transmission according to claim 8, wherein said step-out determining means determines a the step-out of said step motor when a lever operation is not being performed by a driver which satisfies a step-out criterion of said step-out.

14. (previously presented) The speed change ratio control unit for a continuously variable transmission according to claim 8, wherein said step-out determining means determines when one or more of the following conditions are satisfied:

hydraulic pressure is in a state capable of realizing a speed change ratio corresponding to a step position **ASTP** of said step motor stored in said speed change ratio control unit is satisfied, on an occasion of a step-out determination,

an alteration of the speed change ratio is a predetermined value or less which satisfies a step-out criterion,

acceleration or deceleration is a predetermined value or less which satisfies a step-out criterion,

braking is not being operated which satisfies a step-out criterion, and

that a lever is not being operated by a driver which satisfies a step-out criterion.